

CLAIMS

1. Purified preparation of type II porcine circovirus.
- 5 2. Purified preparation of porcine circovirus selected from the group consisting of the preparations deposited at the ECACC, under the following references:
  - accession No. V97100219
  - accession No. V97100218
  - 10 accession No. V97100217
  - accession No. V98011608
  - accession No. V98011609.
- 15 3. Preparation of porcine circovirus produced on, and isolated from cells in cell culture in vitro, these cells having been infected with a porcine circovirus capable of being isolated from a physiological sample or from a tissue sample, especially lesions, from a pig having the PMWS syndrome.
- 20 4. Preparation of porcine circovirus according to Claim 3, produced on, and isolated from a pig kidney cell line.
5. Preparation according to Claim 4, produced on, and isolated from PK/15 cells free from contamination with PCV.
- 25 6. Culture extract or supernatant, collected from a cell culture in vitro of cells which have been infected with the aid of a circovirus according to Claim 1.
7. Antigenic preparation, collected from a cell culture in vitro of cells which have been infected with the aid of a circovirus according to Claim 1.
- 30 8. Vaccine comprising an antigenic preparation according to Claim 7, comprising porcine circovirus as antigen.
9. Vaccine according to Claim 8, characterized in that the vaccine comprises the attenuated live whole antigen, in a vehicle or diluent acceptable from the veterinary point of view and optionally an adjuvant

acceptable from the veterinary point of view as well as, optionally, a freeze-drying stabilizer.

10. Vaccine according to Claim 9, characterized in that the antigen is inactivated and the vaccine 5 comprises, in addition, a vehicle or diluent acceptable from the veterinary point of view and optionally an adjuvant acceptable from the veterinary point of view.

11. Vaccine according to Claim 8, characterized in that it comprises antigens of several porcine 10 circoviruses.

12. Vaccine according to Claim 8, characterized in that it comprises, in addition, at least one other valency which corresponds to another pig pathogen.

13. DNA fragment containing a sequence selected 15 from the group consisting of the sequences designated by the references

SEQ ID No: 1

SEQ ID No: 2

SEQ ID No: 3

SEQ ID No: 4

20 SEQ ID No: 6

14. DNA fragment containing an ORF selected from the group consisting of ORFs 1 to 13.

15. DNA fragment according to Claim 14, characterized in that it contains an ORF selected from 25 the group consisting of ORFs 4, 7, 10 and 13.

16. Polypeptide encoded by a DNA fragment according to Claim 13.

17. Polypeptide encoded by a DNA fragment according to Claim 14.

30 18. In vitro expression vector comprising, integrated into its genome, a DNA sequence or fragment according to Claim 13, so that it can be expressed in vitro.

35 19. In vitro expression vector comprising, integrated into its genome, a DNA sequence or fragment according to Claim 14, so that it can be expressed in vitro.

20. Expression vector according to Claim 18, characterized in that it is selected from *E. coli* and baculovirus.

21. Polypeptides produced by an expression vector 5 according to Claim 18.

22. Polypeptides produced by an expression vector according to Claim 19.

23. Subunit vaccine, comprising at least one polypeptide according to Claim 21 in a diluent or 10 vehicle acceptable from the veterinary point of view, and optionally an adjuvant acceptable from the veterinary point of view.

24. Subunit vaccine, comprising at least one polypeptide according to Claim 22 in a diluent or 15 vehicle, acceptable from the veterinary point of view, and optionally an adjuvant acceptable from the veterinary point of view.

25. In vivo expression vector comprising, integrated into its genome, a DNA fragment according to 20 Claim 13, so that it can be expressed in vivo.

26. In vivo expression vector comprising, integrated into its genome, a DNA fragment according to Claim 14, so that it can be expressed in vivo.

27. Expression vector according to Claim 25, 25 characterized in that it is selected from live viruses capable of multiplying in pigs without being pathogenic for this animal, and plasmids.

28. Expression vector according to Claim 26, characterized in that it is selected from live viruses 30 capable of multiplying in pigs without being pathogenic for this animal, and plasmids.

29. Expression vector according to Claim 27, characterized in that the viral vector is selected from pig herpes viruses, such as Aujeszky's disease virus, 35 porcine adenovirus, poxviruses, especially vaccinia virus, avipox virus, canarypox virus, swinepox virus.

30. Expression vector according to Claim 28, characterized in that the viral vector is selected from pig herpes viruses, such as Aujeszky's disease virus,

porcine adenovirus, poxviruses, especially vaccinia virus, avipox virus, canarypox virus, swinepox virus.

5 31. Live or plasmid vaccine, characterized in that it comprises an expression vector according to Claim 25 in a vehicle or diluent acceptable from the veterinary point of view.

10 32. Live or plasmid vaccine, characterized in that it comprises an expression vector according to Claim 26 in a vehicle or diluent acceptable from the veterinary point of view.

15 33. Probe or primer comprising all, or part of the sequence according to Claim 13.

15 34. Probe or primer comprising all or part of the sequence according to Claim 14.

20 35. Polyclonal or monoclonal antibodies prepared from the circovirus according to Claim 1, or from a polypeptide encoded by a DNA fragment having a sequence selected from the group consisting of SEQ ID NOS. 1, 2, 3, 4 and 6; or from a polypeptide from expression by a vector comprising a sequence selected from the group consisting of SEQ ID NOS. 1, 2, 3, 4 and 6; or from a polypeptide from expression by a vector comprising DNA including an ORF selected from the group consisting of ORFs 1 to 13.

25 36. Method of detecting porcine circovirus, in which, in a sample of physiological fluid or a sample of tissue of a pig to be tested, a test is carried out for the presence of an antigen by seeking to detect either the antigen itself or the antibodies directed against this antigen.

30 37. Vaccine comprising a culture supernatant or extract according to Claim 6, comprising procine circovirus as antigen.

38. Vaccine according to one of claims 23, 24, 31 or 32, characterized in that it comprises antigens of several porcine circoviruses.

5

39. Vaccine according to one of claims 23, 24, 31 or 32, characterized in that it comprises, in addition, at least one other valency which corresponds to another pig pathogen.

10 40. Vaccine according to claim 11, 12, 38 or 39, characterized in that it comprises at least one other valency chosen among the group consisting of : PRRS, Mycoplasma hyopneumoniae, Actinobacillus pleuropneumoniae, E. coli, Atrophic Rhinitis, Pseudorabies, Hog cholera and Swine Influenza.

15 41. Vaccine according to claim 40, characterized in that it comprises at least one other valency chosen among the group consisting of PRRS and Mycoplasma hyopneumoniae.